Posture from the Ground Up

METROPOLITAN LIFE INSURANCE COMPANY
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Posture from the Ground Up

YOUR POSTURE is the position in which you hold your body, whether standing, sitting, lying down, playing games, or performing the routine duties of your daily job. Do you stand without stiffness and strain, with your chest lifted up, your abdomen drawn in and upward, and your head well balanced and erect? Do you look as though you had plenty of confidence and self-respect? The pictures on pages 10 to 15 illustrate good posture (and in some cases poor posture) in many everyday activities.

Individual differences in body build depend largely upon heredity. Some people are born to be short and thickset; others to be tall and thin. Posture, on the other hand, is affected largely by what happens as a child is growing up. Most children who are healthy and well nourished naturally have good posture by the time they have learned to walk and run. Later, through carelessness, nervous or mental faults, or poor physical health, bad posture may develop and they may lose that grace and balance which characterized all their movements in play.

To maintain good posture in your children and in yourself, or to correct bad posture in those who are not physically deformed, the factors which affect posture must be kept in mind.

BODY BALANCE

The shape of the body is maintained by a framework of bones fastened together at the joints by ligaments. Muscles attached to the bones by tendons help to hold the bones in place and move the movable ones. The strong flexible column of bones known as the spine or backbone is the great supporting center of the body. A central line, or axis, running through the middle of the body would follow the path of the backbone up through the trunk (see Figs. 1 and 2).

From the ground up, body balance depends upon the even distribution of weight about an imaginary central axis. Whenever you move, many different sets of muscles, bones, and joints func-

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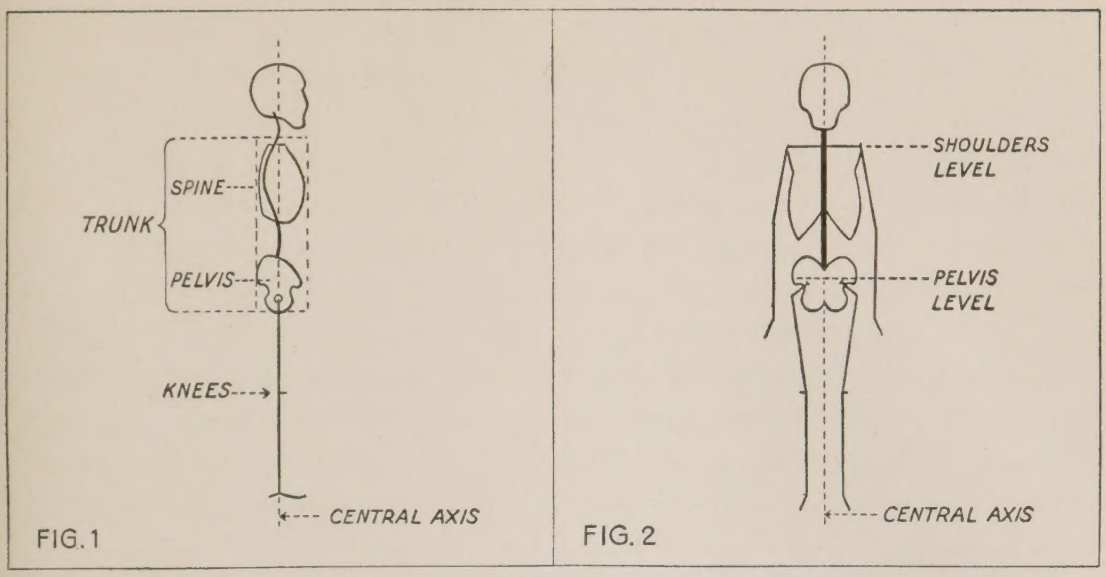

Diagram showing distribution of body weight about an imaginary central axis, as seen from the side (arms omitted).

Diagram showing distribution of body weight about an imaginary central axis, as seen from front or back.

tion as levers in adjusting the weight masses of the body so that you can keep your balance. While standing or sitting, movement may be so slight that it is barely noticeable. In playing a strenuous game, such as tennis or football, thousands of adjustments must be made at high speed.

EXERCISE

Exercise gives the muscles practice in moving the bones with speed and ease. To perform the simplest action several groups of muscles are brought into play. In many exercises almost every muscle in the body is used. The training gained through exercise makes it possible to form the habit of good posture. It is only by practice that the muscles can be taught to hold the body correctly without constant direction from the thinking part of the brain.

Exercise also helps to strengthen the muscles. Words are wasted in badgering a person to "straighten up" if he lacks the muscular strength to do so. He will hold the correct position only as long as he is actively thinking about it, which is not very often during the day. Exercise is the special thing you can do to keep your muscles in good condition.

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Usually a healthy person can get the exercise necessary for training and strengthening his muscles by walking and by taking part in games, sports, and other enjoyable outdoor activities. Many people, however, find that regular exercises taken systematically in the home help to round out recreational activities.

In some cases special exercises are necessary to correct faults in posture which have developed through carelessness or as a result of malnutrition or slight imperfections in body build. Corrective exercises of this kind should be prescribed by a physician and carried out under his direction. It is seldom possible for a person wholeheartedly to carry out corrective exercises by himself. An instructor is necessary just as in learning to play a musical instrument.

FATIGUE

From personal experience you know that it is practically impossible to maintain good posture when you are very tired. Fatigue may be caused by working or playing too hard or too long, by faulty posture, or by malnutrition or some other physical disability.

No form of exercise should be carried to the point of exhaustion. The individual's own feelings are the truest guide. As a result of the right amount of exercise a person will feel pleasantly exhilarated and not experience fatigue or pain in the muscles the next day. Parents should be familiar with the physical signs of overtiredness in their children and insist on a period of rest when these signs appear. The onset of exhaustion is marked by fatigued posture with relaxed muscles and drooping shoulders, a strained look in the face, and a tired look about the eyes. Children, particularly those with poor posture, should have a rest period of at least an hour during the day. Adults, too, will find that a brief period of rest or relaxation in a well-aired room or out of doors two or three times a day will pay large dividends in improved efficiency and freedom from fatigue.

Poor posture due to temporary fatigue is easily remedied. However, chronic fatigue which is frequently shown by poor posture may be associated with poor health. A person who feels tired all the time should consult a physician.

NUTRITION

Good posture can only be maintained by healthy muscles and well-shaped bones working efficiently together. A person whose bones and muscles are poorly developed because of poor nutrition cannot hold his body straight, no matter how hard he tries. The food needs of the bones and muscles, as well as of all other parts of the body, are usually supplied by eating a variety of foods every day. Since vitamin D is the only essential that does not occur in large enough amounts in ordinary foods to supply the needs of growing children, it is advisable to include in their diet one of the fish-liver oils, such as cod-liver oil, or some other vitamin concentrate.

CLOTHES AND FURNITURE

Clothes have a direct effect on health and posture. When clothes are too heavy or too tight, they interfere with freedom of movement. Heavy wraps cause fatigue; tight garters or belts impede circulation; tight shoulder straps restrict the action of the arm or chest muscles; elastics around the middle just below the ribs may make the stomach stick out. Children especially may be handicapped by shoes that are too short without complaining of any feelings of discomfort.

Clothes for children should be chosen with thought for the child's activities and with some allowance for his growth. When at all possible, allow a child to help in the selection of his clothes. Young people sometimes brood because they feel too tall or too short or too fat, and take an unreasonable dislike to a garment that seems to them to emphasize an objectionable feature. If a child is made unhappy by being forced to wear clothes that make him conspicuous, it may be reflected in his posture. On the other hand, a becoming costume may be the incentive needed to make him stand erect and confident.

Furniture obviously affects posture. Chairs and tables especially should be of such size and shape that the person using them habitually is not tempted to slump. While sitting, the hips should be far enough back in the chair seat to allow the thighs to support the weight of the body. The seat should be just high enough above the ground and just long enough from front to back to allow the feet to rest flat on the floor while the lower part of the back is

supported comfortably by the chair back. When sitting at a desk or table, it should be possible to rest the forearms on the top surface with the back held straight and the shoulders level.

PHYSICAL AND EMOTIONAL DIFFICULTIES

Poor posture may be directly caused by defective vision, eyestrain, impaired hearing, or bone defects which may occur in children during adolescence. Thrusting the head forward to see better may be associated with nearsightedness. Cocking one side of the head toward a speaker may indicate loss of hearing in one ear. Marked "round shoulders" may be a sign of some disease of the bones of the spine. All children should have competent and thorough physical examinations, including tests of sight and hearing, before entering school and at regular intervals thereafter.

A person in good physical health may lack a confident, upright bearing because of some secret unhappiness. An uncongenial home life, work that is distasteful, a feeling of inferiority, unfulfilled wishes, or shyness may result in a "hangdog" attitude. Emotional conflicts, regrets, worry, or fear, may definitely affect posture. Children—adolescent boys and girls especially—may harbor hurt feelings, fears, grudges, and notions of not being understood which react upon their health. If it is possible to straighten out such difficulties promptly, the posture may take care of itself.

If the mind and the body are both healthy, the will is, after all, the directing factor in maintaining good posture or correcting bad posture. All through our waking hours we can, by taking thought, alter our positions. We do this continually in the interests of comfort. If we form the habit of holding incorrect positions, these, rather than the correct ones, will be comfortable. This is why it is important to form the habit of good posture early in life.

THE FEET

The feet play a very important part in body balance, as they support the entire weight of the body both in standing and in moving and hold it upright against the downward pull of gravity. Each foot is shaped like a triangle. The heel at the back corner of the triangle gives one point of contact with the ground. Across

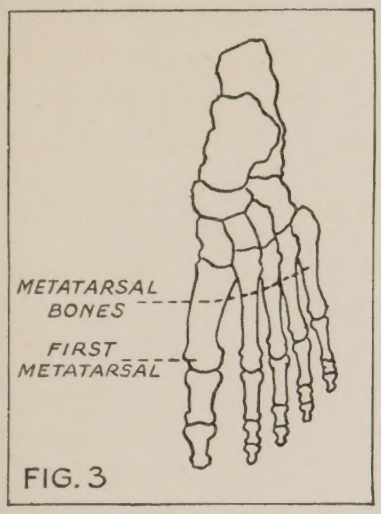


FIG. 3

the front part of the foot the heads of five long bones just behind the toes give the other points of contact. These bones are called the metatarsal bones (see Fig. 3). They give the foot its stability in balanced posture.

The heel at the back of the foot and the heads of the metatarsal bones in front are like islands connected with each other by five arched bridges. The bones forming these five bridges are bound together by ligaments. The fact that they are covered with flesh gives them the appearance of a single long arch stretching from the heel to the base of the toes. In standing or walking, the muscles tighten up so that the long arches of the feet may support the weight of the body and distribute the total load properly upon each of the five arched segments.

The Feet in Walking—When the heel is lifted from the ground in walking or running the weight of the body is immediately thrown forward upon the front part of the foot. This means that body weight, instead of being divided evenly between the heel and fore part of two feet (as in standing), is alternately borne in its entirety by the metatarsal bones of each foot—especially by the first and second metatarsal bones, as they extend farthest forward. If the first metatarsal bone is too short or if its ligaments are lax, the weight is concentrated upon the second metatarsal and the entire mechanism of the foot is impaired.

In developing an easy, graceful style of walking, the first rule to remember is to lead with the knees. Step straight ahead, with the knees brushing each other and the big toes just missing each other. Excessive toeing-out is a sign of weak, unbalanced feet and is definitely harmful because it disturbs the distribution of weight on the feet.

Correction of Foot Defects—Recent investigation has shown that many foot troubles may be traced to faults in structure which interfere with normal distribution of body weight. Among such disorders are rolling inward of the ankles (commonly known as "weak-ankle posture"), tiredness and pain in the muscles running under the long arch of the foot (usually associated with falling

arches), and calluses under the balls of the feet. Very often too much stress is laid on the height of the arch in judging the condition of the foot, whereas a more important factor is probably the amount of muscle power available for giving a normal range of motion to each part of the foot.

If your feet trouble you, an examination by a physician is the best means of finding out what the difficulty is. It may be necessary to consult an orthopedic surgeon if a serious amount of disorder is suspected.

The correction of defects of the feet often means the wearing of special devices in the shoes or adhesive strappings which relieve faulty strains and stresses. These should be especially prescribed in each individual case. Also, the physician will tell the foot sufferer what to do to relieve the pain of inflamed sore areas caused by uncorrected defects. If the feet are exquisitely tender, rest may be required until the damage has been repaired.

Defects in the structure of the feet may often be corrected if discovered in childhood. When first learning to walk, all babies seem to be flat-footed, but in a short while the arches become apparent. If the flat-footed appearance persists, medical advice should be sought. Other signs for which parents should be on the lookout are reluctance to walk any distance, bending in of the ankles, excessive toeing-out, and complaints of pain in the feet or leg muscles.

Painful corns and bunions are usually caused by pressure from badly fitting shoes. It is always safest to have ailments of this kind taken care of by someone especially qualified to treat the feet; self-treatment may result in a serious infection.

To avoid ingrowing toenails the nails should be cut straight across and even with the ends of the toes. Never cut them in at the corners. Always use clean scissors and take great care not to cut the flesh of the toes. Powder sprinkled in the spaces between the toes after a bath will help to keep them dry and prevent cracking of the skin.

Buying Shoes—It is possible now to buy shoes that satisfy a person's natural desire to be in style and yet assure a reasonable degree of comfort and health for the feet. The main question to keep in mind in buying shoes is, "On what occasions shall I wear them?" Certainly the shoes worn during working hours and for walking or shopping tours should be thoroughly comfortable, and

not of the very high-heeled variety. You should expect them to fit the feet at least as well as you expect gloves to fit the hands.

Plenty of time should be taken in buying new shoes. Always have your feet measured, and do not "just take" the same size as that of the shoes you are wearing. The feet do change from time to time, and also some former shoe salesman may have made a mistake.

Test the fit of new shoes both in standing and walking about. The foot spreads in standing, some feet more than others, and no shoe fits properly unless it has room to spare for the use of the foot in standing and walking. A shoe should fit snugly around the heel and have enough width in the front part to accommodate the metatarsals and toes comfortably. The heel should have a base sufficiently broad and substantial to give the body a feeling of support and balance.

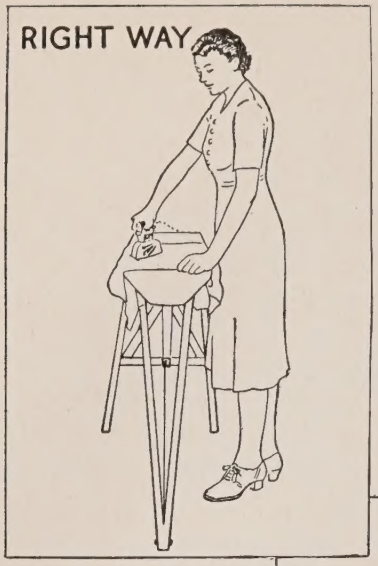
When heels are too high, the weight of the body is thrown forward so that the front part of the foot gets more than its fair share of the burden. The muscles in the feet, legs, knees, and back all feel the strain of making the adjustments necessary to keep the body from losing its balance entirely. A desirable feature of shoes with high thin heels worn on dress occasions is extra stiffening in the narrow shank. This helps to preserve the shape of the shoes and to give them some degree of stability for the benefit of the feet. Shoes should be kept in good repair, as worn-out soles and run-down heels are possible factors in foot strain.

Children's shoes should be flexible, with broad toes and firm, flat soles; they should be made so that the weight of the body falls equally on the balls and the heels. As soon as the shoe is outgrown, and this may happen within a few months if a child is growing rapidly, they should be replaced. Hose that are too short or too long or too tight are often a source of foot trouble in both children and adults, and they, too, need to be selected with care.

Posture in Everyday Activities

by

LILLIAN D. MALLORY

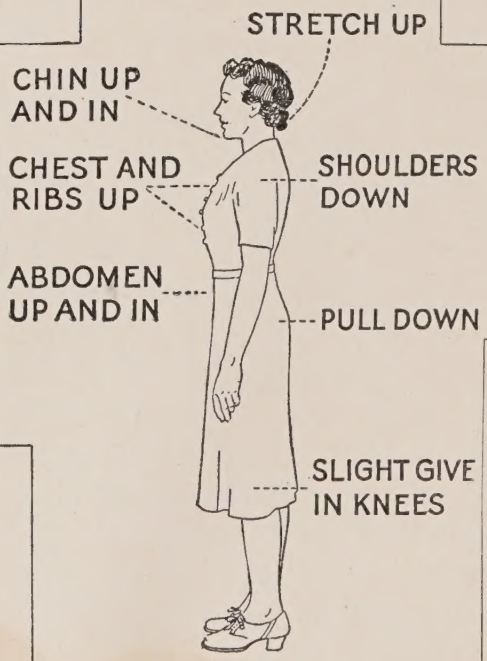


IRONING

Shoulders down, back straight, abdomen in. If the board is too low, see page 14.

IRONING

Note high shoulders, forward head, round back, lax abdomen, toes out.



REACHING

Stretch middle, chest up, shoulders down.

FUNDAMENTAL STANDING

(Side view)

A straight line should pass through the ear, shoulder, hip joint, behind the knee joint, in front of the ankle, to the floor. *General Posture Rule:* UP IN THE FRONT, DOWN IN THE BACK.

SWEEPING—(Erect)

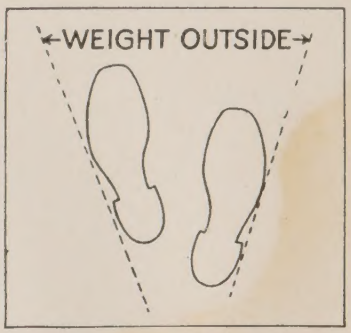
Stand tall, look down with the chest up, no shoulder hunching. Same in similar activities in the erect position.

Swing leg from hips, bend and relax the knee as it comes forward. Knee straight, but not stiff, as it takes weight. Chin and chest up.

WALKING

Upper body still, feet pass close together leaving an imaginary trail of two parallel lines, toes straight ahead.

Men walk more vigorously but use the same principles. Head up, chest out, even arm swing, push with big toe.



Comfortable position for the feet when standing erect. Heel of the forward foot opposite the instep of the other foot.

FUNDAMENTAL STANDING— (Front view)

A straight line should drop from the chin, through the throat hollow, the middle of the trunk, and between the knees and the feet to the floor. Cultivate standing easily erect, neither stiff and tense nor awkwardly slumped.

SWEEPING—(Bending forward)

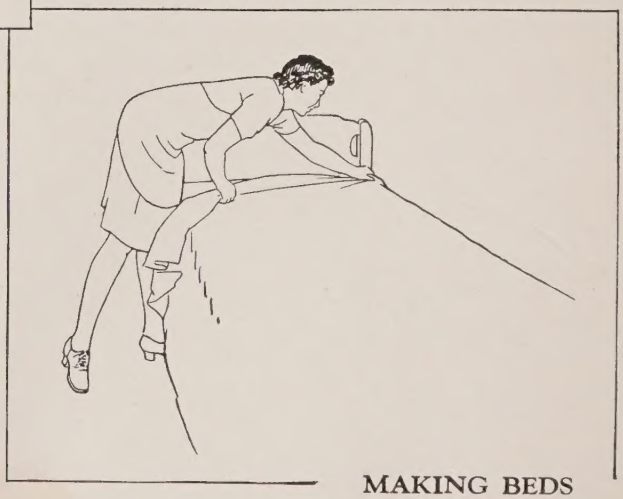
Bend knees, abdomen in, back evenly rounded, one foot forward. Same for dusting, washing, making beds, etc.

SCRUBBING

Don't round the back or let the head, neck, and upper body droop.

SCRUBBING

Lean on the brush with back and feet straight, shoulders down.



MAKING BEDS

Reaching to the far side offers opportunity for a long stretch in the middle. Weight on the forward foot.

WASHING DISHES

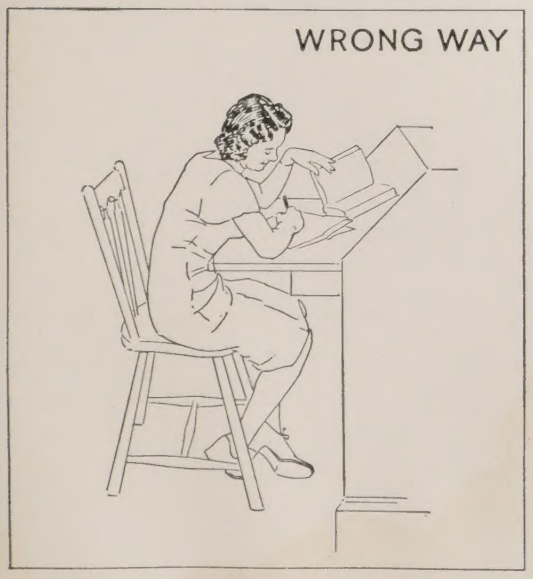
Stand erect. If the sink is too low, bend forward from the waist, knees relaxed, hips under, abdomen in, shoulders down.

WASHING DISHES

Notice the round back and shoulders, forward head, lax abdomen, one hip high, knees stiff, toes out.

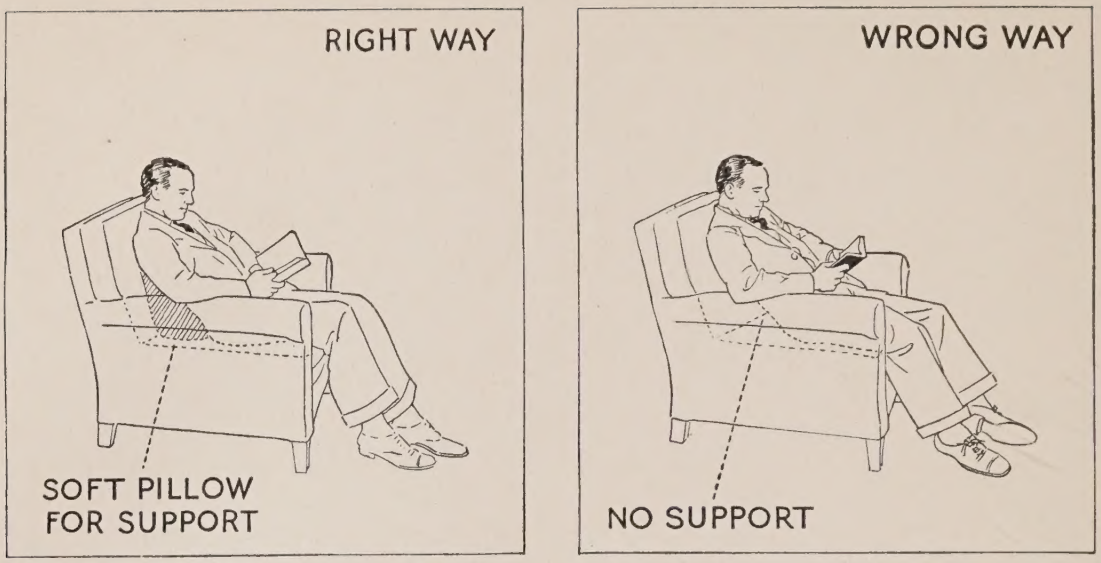
SITTING

Sit with both upper and lower back against the chair when sewing, attending lectures, church, movies, etc. When bending forward at a desk or table, keep the lower back against the chair; arms on the table furnish minor support. At all times keep the shoulders back, down, and relaxed, back straight, abdomen in, one foot forward and one foot back. Look down, with the chest up.



SITTING

Sitting on the edge of a chair or sliding hips forward with no lower back support plus careless twisting of feet and legs, slumping, bending forward from the neck and upper back, shoulders high and tense, may cause neckache and backache, pain between the shoulders, and general fatigue. Don't bend down to handwork. Use a table if desired, but sit erect.



READING IN EASY CHAIR

To avoid backstrain there should be no space between the lower back and the chair. Either sit well back or slide the lower body forward and place a cushion at the lower back for support, one foot forward or both on a footstool. Don't bury the head and neck in high, shrugged shoulders or twist and bend the ankles.

IRONING—(Sitting)

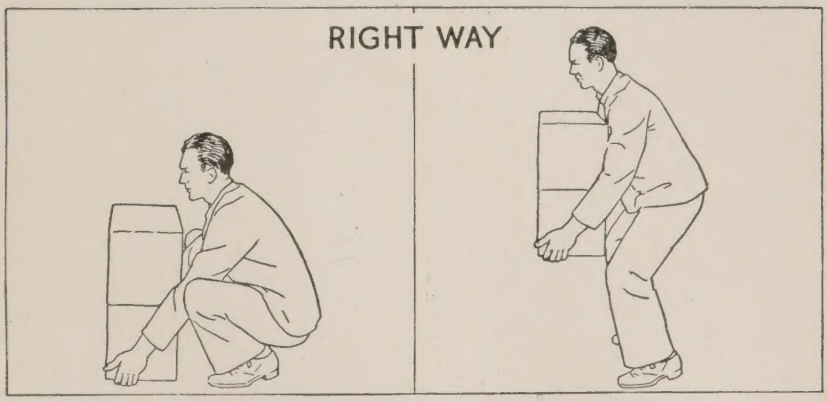
To conserve energy or if the board is too low for standing erect, sit on a high stool, one foot forward. Place the weight of the body over the iron, abdomen firm, chest up, shoulders down, and back straight.

UP AND DOWN STAIRS

Back straight, hold railing. Reach for the step, toe first, going down. Push with the back of the foot going up.

LIFTING

Lifting from a bent-over position, back round, knees stiff, may cause serious back injury or strain.

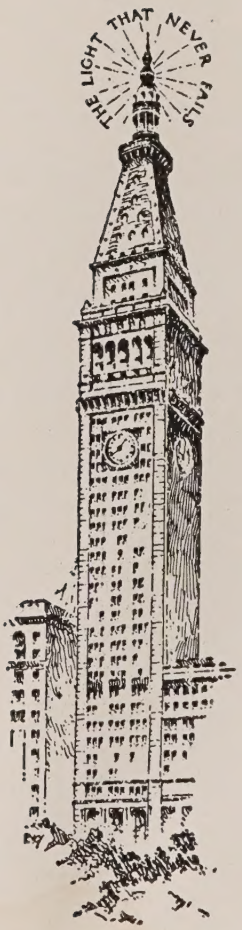


LIFTING

Keep the back straight, feet flat on the floor, knees bent to avoid back injury or rupture.

CARRYING

Keep the back straight, shoulders level and down when carrying packages, bundles, luggage, etc. Carry the object close to the body. Don't round the back or lift or drop one shoulder.



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